

IN THE CLAIMS:

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 25 (cancelled).

26. (currently amended) An interface system at a base station in a cell within a cellular wireless network for providing bi-directional²⁰ wireless communications to Network Interface Units (NIUs) ²⁶at customer sites within the cell, each of said NIUs having a highly directional antenna [[and]] for providing a point to point inter-cell radio link for communicating with a base station in a neighboring cell comprising[[;]] an asynchronous transfer mode (ATM) multi-services switch equipped with a first one or more radio interface card for providing wireless communications between the base station and the NIUs via said highly directional antenna and a second one or more radio interface card for providing the point to point inter-cell radio link.

27. (previously presented) An interface system as defined in claim 26 wherein said cellular wireless network has a plurality of cells, each having a base station for providing wireless communications to NIUs within each cell and for providing a point

5 to point inter-cell radio link with other base stations within the network.

28. (previously presented) An interface system as defined in claim 27 wherein one of the base stations is controlled by a network manager to provide configuration parameters for each of said first one or more and said second one or more interface cards in each of the multi-services switch in each base station.

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29. (previously presented) An interface system as defined in claim 28 wherein the cellular wireless network is connected to an asynchronous transfer mode (ATM) network.

30. (previously presented) An interface system as defined in claim 26 wherein each cell is sub-divided into sectors and each base station has a sectorized antenna for communicating with NIUS located in each sector within the cell.

31. (previously presented) An interface system as defined in claim 30 wherein each of said first one or more interface cards and each of said second one or more interface cards communicates with said sectorized antenna via one or more combiners.

32. (currently amended) An interface system as defined in claim [[25]] 27 wherein said inter-cell radio link between

respective base stations is in a ring configuration, wherein one of the base stations is connected to [[said]] an ATM network and [[the]] a network manager, and each of said other base stations is in bidirectional communication with said one base station over inter-cell radio links.

33. (previously presented) An interface system as defined in claim 27 wherein said inter-cell radio link between respective base stations is in a mesh configuration.

34. (currently amended) A base station in a cell of a cellular, wireless communications network for providing wireless, bi-directional communication with network interface units (NIUs) within the cell having highly directional antenna [[and]] for providing a point to point inter-cell radio link with a base station in a neighboring cell, the base station having an asynchronous transfer mode (ATM) multi-services switch equipped with a first radio interface card for providing the wireless, bi-directional communication between the base station and the NIUs and a second interface card for providing the point to point radio inter-cell link, said radio interference cards being, selectively, one of the following: frequency division multiple access (FDMA) or time division multiple access (TDMA).

35. (previously presented) A base station as defined in claim 34, wherein said cell is sub-divided into multiple sectors and said multi-services switch is equipped with a first radio interface card for each sector.

36. (previously presented) A base station as defined in claim 35 connected to an Asynchronous Transfer Mode backbone for providing broadband wireless service to said NIUs.

37. (previously presented) A base station as defined in claim 36 connected to a network manager for receiving configuration parameters respecting said first and second radio interface cards.

38. (previously presented) A base station as defined in claim 37 wherein said configuration parameters include; operating frequencies, modulation rates, forward error correction values, and transmission power levels.

39. (previously presented) A base station as defined in claim 35 wherein said second interface card is equipped to provide point to point, bi-directional radio communication with base stations in neighboring cells over said radio inter-cell link.

40. (previously presented) A base station as defined in claim 39 wherein said radio inter-cell link is in a ring configuration.

41. (previously presented) A base station as defined in claim 39 wherein said radio, intercell link is in a mesh configuration.

42. (currently amended) A method of providing communications between base stations in a cellular, wireless network having multiple cells, each of the multiple cells having a base station, the method ~~comprising~~ comprising: providing an asynchronous transfer mode (ATM) multi-services switch at each of the base stations, each switch being equipped with a radio interface card for providing point to point bi-directional communication with other base stations in the network; providing a network manager in association with at least one of the base stations for configuring the radio interface cards, and providing a directional antenna for each multi-services switch to support point to point bi-directional communication between base stations over a radio inter-cell link.

43. (previously presented) The method as defined in claim 42 wherein each of said cells is sub-divided into multiple sectors and said multi-services switch is equipped with second radio interface cards for each sector, said second radio interface cards

5 for wireless, bi-directional communication with network interface units (NIUs) within each sector.

44. (previously presented) The method as defined in claim 43 wherein said network manager configures said radio interface cards with respect to operating frequencies, modulation rates, forward error correction values, and transmission power levels.

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45. (previously presented) A scaleable, broadband wireless system for providing radio access to a metropolitan area comprising: a plurality of overlapping cell areas, each cell area having a base station and a plurality of fixed user sites having
5 network interface units (NIUs) within each cell area,

ATM radio interface cards (ARICs) in each base station for implementing wireless, bi-directional communication between said base stations and user sites, each said ARICs being adapted to operate selectively on frequency division multiple access (FDMA)
10 protocol, or two time division multiple access (TDMA) protocol.

an ATM backplane at one of said base stations constituted by a plurality of ARICs, each base station ARICs being provided with implementing protocols for bi-directionally linking with the ATM backplane, said ARICs being adapted to operate on a multiple access
15 protocol so as to provide point-to-point radio access between base stations over intercell links, and whereby the system can be scaled by adding ARICs to said ATM backplane as required to meet demand.

Claim 46. (cancelled).

Claim 47. (cancelled).

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48. (Previously presented) The broadband wireless system defined in Claim 45 wherein one of said base stations includes said ATM backplane and a network manager for configuring the operating frequencies, establishing modulation rate and establish a selected
5 forward error correction (FEC) value and sets the transmission power levels for the users thereof.
